BookletChartTM

NOAR NO ATMOSPHERIC PLANMISTRATION SO DEPARTMENT OF COMMERCE

Intracoastal Waterway – Ellender to Galveston Bay

NOAA Chart 11331

A reduced-scale NOAA nautical chart for small boaters When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the National Oceanic and Atmospheric Administration National Ocean Service Office of Coast Survey

<u>www.NauticalCharts.NOAA.gov</u> 888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart[™]?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=113 https://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=113 https://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=113 https://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=113 https://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=113 https://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=113 <a href="https://www.nauticalcharts.noaa.gov/nsd/searchbycharts.n



[Selected Excerpts from Coast Pilot]
Mermentau River empties into the Gulf of Mexico 86 miles W of Atchafalaya Bay Entrance E of Calcasieu Pass. The entrance channel shifts frequently and should be approached with caution.

Calcasieu Pass, the outlet of Calcasieu Lake, is about 98 miles W of Atchafalaya Bay entrance and 78 miles E of Galveston entrance. It is the first and only deep-draft channel W of the Mississippi River and E of Sabine Pass.

Cameron, the seat of Cameron Parish, is a fishing village on the E shore of Calcasieu Pass 2.5 miles above its entrance. The village has numerous oil-well supply bases, shrimp-packing houses, and a menhaden

processing plant. Gasoline, diesel fuel, water, ice, and marine supplies are available; electrical and engine repairs can be made.

Sabine Pass and its connecting channels form an extensive system of deepwater routes leading inland as far as Beaumont and Orange, Texas. From Sabine Pass the coast follows a general WSW direction for 50 miles to Galveston Entrance. Except in the E part, deep water extends fairly close inshore. The coast is low and devoid of prominent features, with the exception of High Island. Heald Bank, off the coast, has depths of 25 to 35 feet and is a danger to deep-draft vessels.

(Vessel Traffic Service Houston–Galveston became mandatory 13 October 1994.

Detailed information on VTS Houston/Galveston's operating requirements, designated frequencies, precautionary areas, and mandatory reporting points can be found in CFR Chapter 2 Part 161 Vessel Traffic Management, tables 161.12, 161.35(b), and 161.35(c). Mariners should obtain the latest edition of the U.S. Coast Guard's Houston/Galveston Vessel Traffic Service User's Manual, available from the Commanding Officer, U.S. Coast Guard Vessel Traffic Houston/Galveston, 9640 Clinton Drive, Houston, TX 77029. Website: www.uscg.mil/VTSHouston.

Anchorages.—Vessels may anchor off the bar in the Galveston Entrance Anchorages just inshore of the intersection of the Galveston Safety Fairway with the Coastwise Fairway. (See 166.100 through 166.200, chapter 2, for limits and regulations.)

Small craft anchoring in the designated areas should find the shoaler water so as to leave the deeper areas clear for larger vessels.

Dangers.—A considerable number of unmarked dangerous wrecks exist in the approaches to Galveston Bay Entrance. A spoil bank is S of the Outer Bar Channel, and an extensive shoal area is S of the channel between the jetties. Heald Bank and the offshore oil well structures are the principal hazards.

Vessels navigating in the Houston Ship Channel from Bolivar Roads to Morgans Point are cautioned about the heavy breakers which result from the bow wakes of tankers and other large merchant vessels in the channel

Dangers.—Texas City Channel—A sunken wreck covered 10 feet is off the entrance to North Slip.

The channel from Galveston Bay to Clear Lake is reported to be highly congested with light commercial and pleasure-craft traffic, especially on weekends; a **speed limit** of 5 miles per hour is posted.

The Coast Guard advises vessels exercise particular caution where the channel intersects the Intracoastal Waterway, about 6.6 miles above the entrance jetties and just below Lighted Buoys 25 and 26. Situations resulting in collisions, groundings, and close quarters passing have been reported by both shallow and deep-draft vessels. The Coast Guard has requested vessels make a **SECURITE** call on VHF-FM channel 13 prior to crossing the Intracoastal Waterway, particularly during periods of restricted visibility.

The Coast Guard has requested vessels transiting the waterway make a **SECURITE** call on VHF-FM channel 13 prior to entering Sabine River, particularly during periods of restricted visibility.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC New Orleans

Commander 8th CG District New Orleans, LA

(504) 589-6225

2

HEIGHTS

Heights in feet above Mean High Water.

CALITION

Numerous submerged wrecks, not recommended for safe passage in this area.

SABINE RIVER

Private Quick Flashing Green Light Nos. 1-9, 10 feet above water; Fixed Green Light Nos. 11-12, 15 feet above water; and Navy Fixed Green Light No. 5, 10 feet above water, are located at the outer end of the piers on the west side of the river at Orange.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

Oyster grounds are marked by stakes and flags. Submerged broken stakes become dangerous obstructions to small craft.

Small craft should stay clear of large com-ercial and government vessels even if smal craft have the right-of-way.

CAUTION

Small craft operators are warned to beware of severe water turbulence caused by large vessels traversing narrow waterways.

The prudent mariner will not rely solely on any single ald to navigation, particularly on loating aids. See U.S. Coast Guard Light List nd U.S. Coast Pilot for details.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

The prudent mariner will not rely solely of single aid to navigation, particularly ting aids. See U.S. Coast Guard Light I

MINERAL DEVELOPMENT STRUCTURES

Obstruction lights and sound (fog) signals are required for fixed mineral development structures shown on this chart, subject to approval by the District Commander, U.S. Coast Guard (33 CFR 67).

All craft should avoid areas where the skir divers flag, a red square with a diagonal white stripe, is displayed.

Gas and Oil Well Structures

Uncharted platforms, gas and oil well struc tures, pipes, piles and stakes can exist within the limits of this chart.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charling purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.787" northward and 0.630" westward to agree with this chart.

CAUTION

Survey platforms, signs, pipes, piles, and stakes, some submerged, may exist along the maintained channels. Piles and platforms are not charted where they interfere with a light symbol.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to

Table of Selected Chart Notes

INTRACOASTAL WATERWAY AIDS The U.S. Aids to Navigation System is de signed for use with nautical charts, and the exact

Aids to navigation marking the Intracoasta Waterway exhibit unique yellow symbols to distinguish them from aids marking other water

When following the Intracoastal Waterway westward from Carrabelle, FL to Brownsville, TX aids with yellow triangles should be kept on the starboard side of the vessel and aids with yellow squares should be kept on the port side of the

A horizontal yellow band provides no latera information, but simply identifies aids to navi gation as marking the Intracoastal Waterway.

CAUTION

SUBMARINE PIPELINES AND CABLES Charted submarine pipelines and submarine cables and submarine pipeline and cable areas

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths ow water comparable to their draft in areas wher pipelines and cables may exist, and wher anchoring, dragging, or trawling. Covered wells may be marked by lighted or

INTRACOASTAL WATERWAY Project Depths

12 feet Carrabelle, FL to Brownsville, TX

The controlling depths are published period ically in the U.S. Coast Guard Local Notice to

Distances

The Waterway is indicated by a magenta line The waterway is indicated by a magenta in Mileage distances shown along the Waterway are in Statute Miles, based on zero at Harvey Lock, LA, and are indicated thus:

Tables for converting Statute Miles to International Nautical Miles are given in U.S. Coast Miles 4.

CAUTION

Survey platforms, signs, pipes, piles, and stakes, some submerged, may exist along the maintained channels. Piles and platforms are not charted where they interfere with a light symbol.

INTRACOASTAL WATERWAY

Project Depths

12 feet Carrabelle, FL to Brownsville, TX.
The controlling depths are published periodically in the U.S. Coast Guard Local Notice to

The Waterway is indicated by a magenta line. The Waterway is indicated by a magenta in Mileage distances shown along the Waterway are in Statute Miles, based on zero at Harvey Lock, LA, and are indicated thus:

Tables for converting Statute Miles to International Nautical Miles are given in U.S. Coast

INTRACOASTAL WATERWAY AIDS

The U.S. Aids to Navigation System is designed for use with nautical charts, and the exact meaning of an aid to navigation may not be clear unless the appropriate chart is consulted. Aids to navigation marking the Intracoastal

distinguish them from aids marking other water

o. When following the Intracoastal Waterway westward from Carrabelle, FL to Brownsville, TX aids with yellow triangles should be kept on the starboard side of the vessel and aids with yellow squares should be kept on the port side of the

A horizontal yellow band provides no lateral information, but simply identifies aids to navigation as marking the Intracoastal Waterway.

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Limitations on the use of radio signals as Limitations on the use of radio signals as adds to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatal-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution. Station positions are shown thus:

⊙(Accurate location) o(Approximate location)

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

CAUTION Gas and Oil Well Structures

Uncharted platforms, gas and oil well structures pipes, piles and stakes exist within the obstruction areas outlined by dashed magenta lines Additionally, uncharted platforms, gas and oil well structures, pipes, piles and stakes can exist outside the outlined obstruction areas, and within the limits of this chart.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National

Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

(Accurate location) o(Approximate location)

Navigation regulations are published in Chapter 2, U.S Coast Pilot 5. Additions or revisions to Chapter 2 are pub ished in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander oth Coast Guard District in New Orleans, LA, or at the Office of the District Engineer, Corps of Engineers in New Orleans LA and Galveston, TX.

CABLE FERRY

Cable across the river may be at or near the water surface
Mariners should exercise caution when navigating in this

CAUTION

WARNINGS CONCERNING LARGE VESSELS

The "Rules of the Road" state that recreational boats shall not impede the passage of a vessel that can navigate only within a narrow channel or fairway. Large vessels may appear to move slowly due to their large size but actually transit at speeds in excess of 12 knots, requiring a great distance in which to maneuver or stop. A large vessel's superstructure may block the wind with the result that sailboats and sailboards may unexpectedly find themselves unable to maneuver. Bow and stern waves can be hazardous to small vessels. Large vessels may not be able to see small craft close to their bows

RULES OF THE ROAD (ABRIDGED)

Motorless craft have the right-of-way in almost all cases. Sailing vessels and motorboats less than sixty-five feet in length shall not hamper, in a narrow channel, the safe passage of a vessel which can navigate only inside that channel.

A motorboat being overtaken has the right-of-way. Motorboats approaching head to head or nearly so should pass port to port.

When motorboats approach each other at right angles or obliquely, the boat on the right has the right-of-way in most

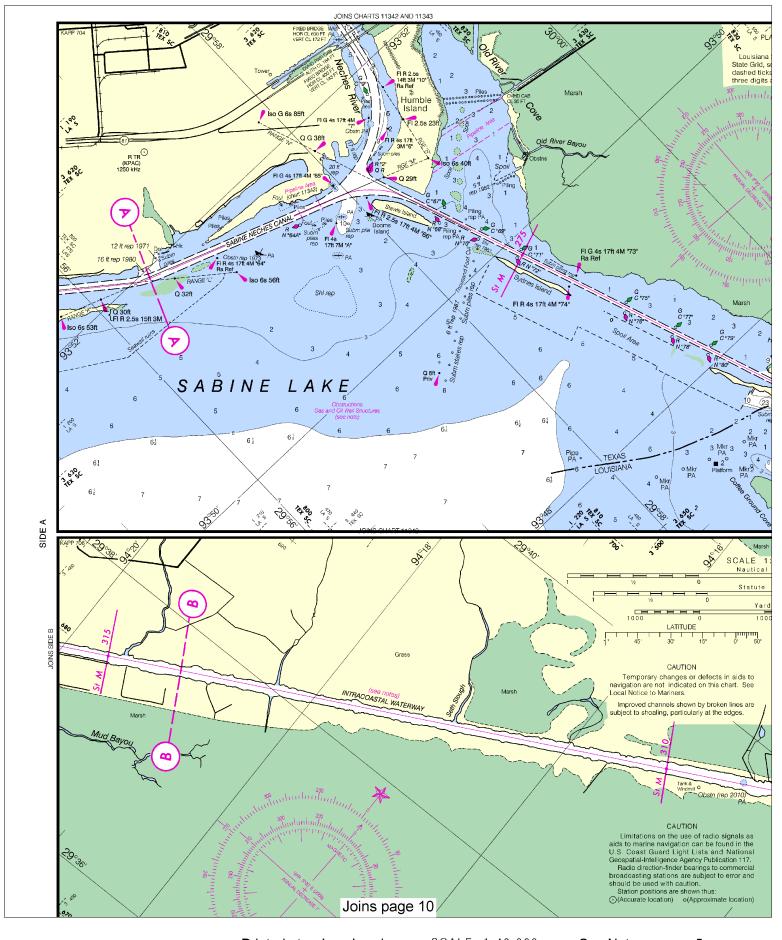
cases. Motorboats must keep to the right in narrow channels when safe and practicable.

Mariners are urged to become familiar with the complete text of the Rules of the Road in U.S. Coast Guard publication "Navigation Rules."

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

MERCATOR PROJECTION SCALE 1:40,000 AT LAT. 29°38' SOUNDINGS IN FEET AT MEAN LOWER LOW WATER North American Datum of 1983 (World Geodetic System 1984)



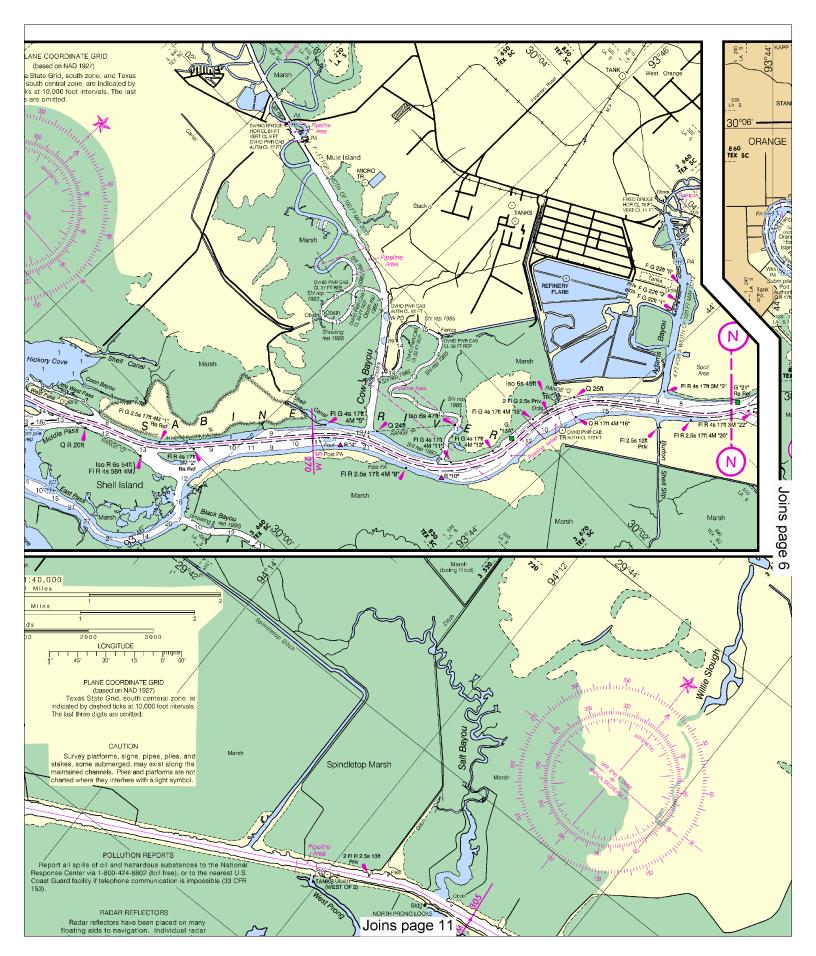
Note: Chart grid lines are aligned with true north.

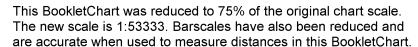
Printed at reduced scale.

SCALE 1:40,000
Nautical Miles

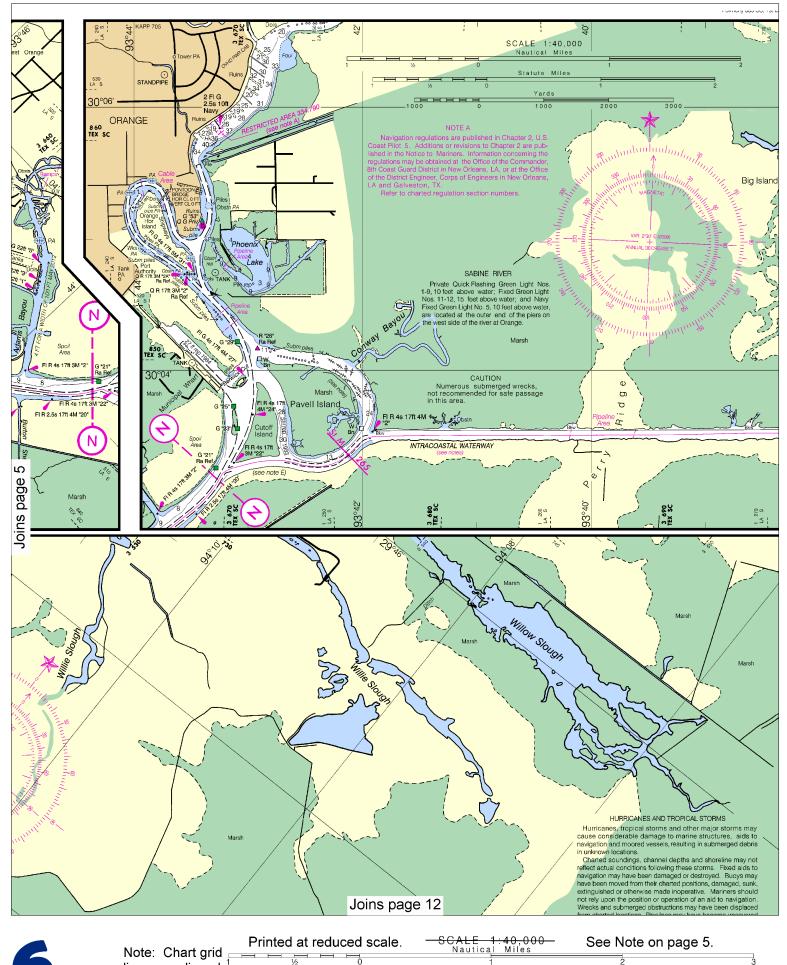
Yards

1000 0 1000 2000 3000 4000 5000









Note: Chart grid lines are aligned with true north.

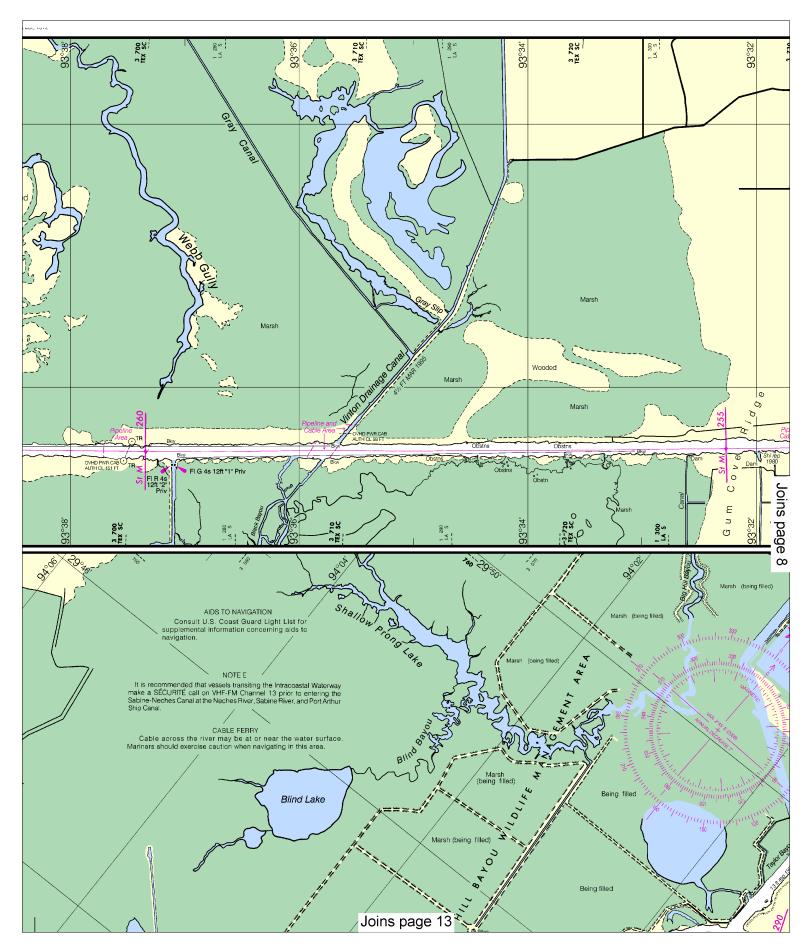
Printed at reduced scale.

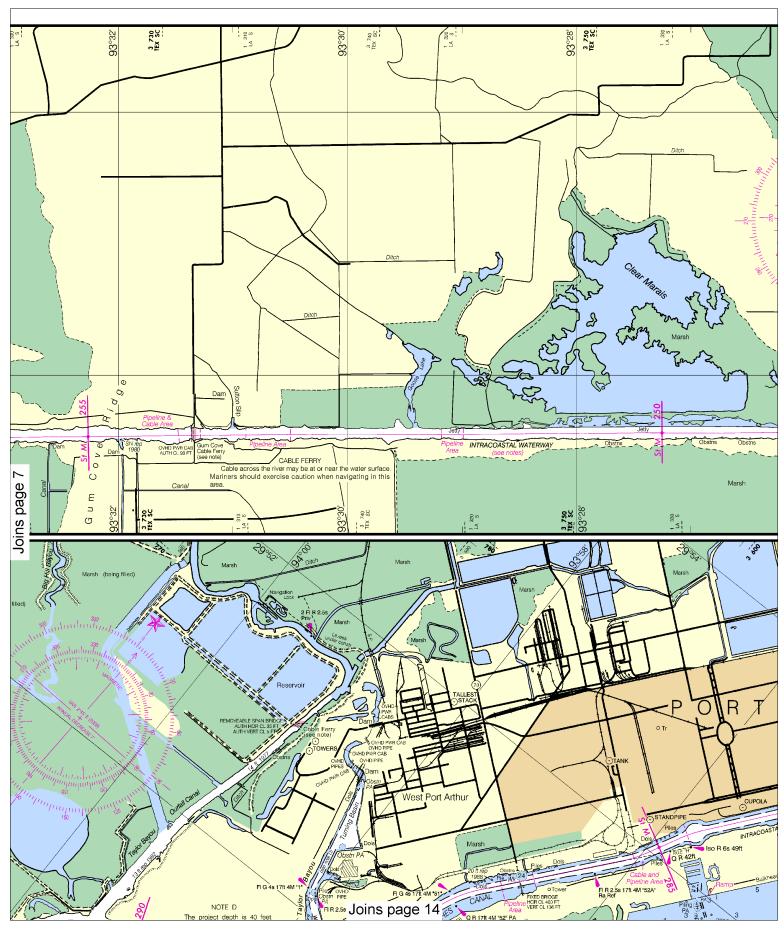
SCALE 1:40,000
Nautical Miles

See Note on page 5.

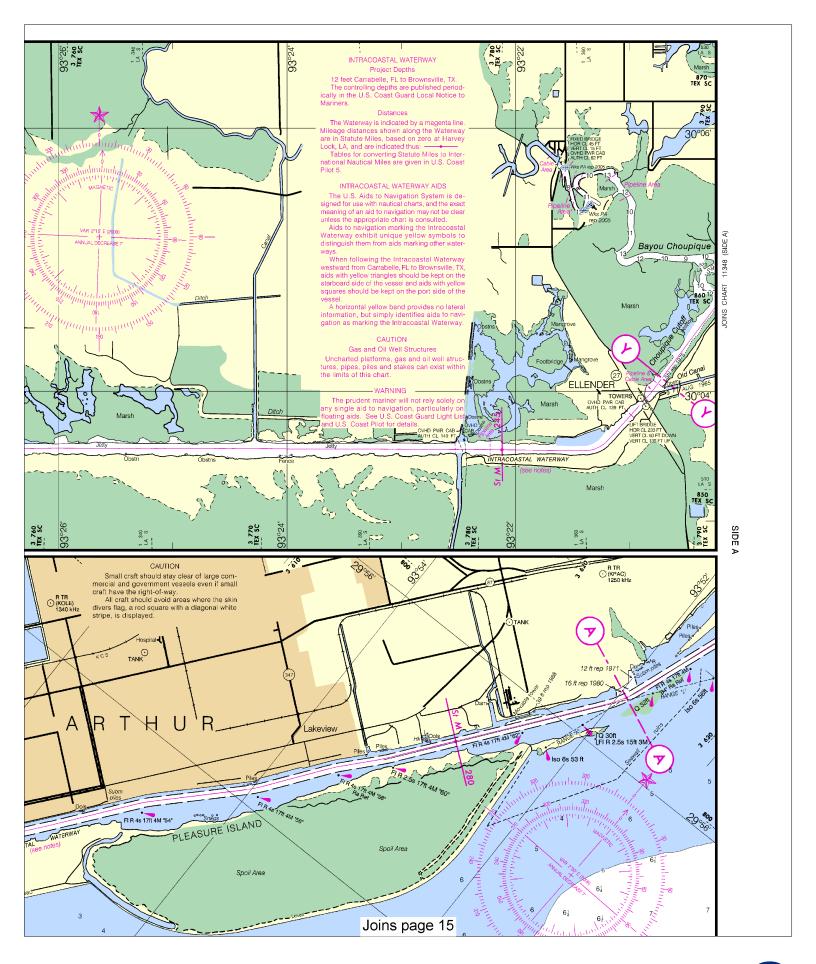
Yards

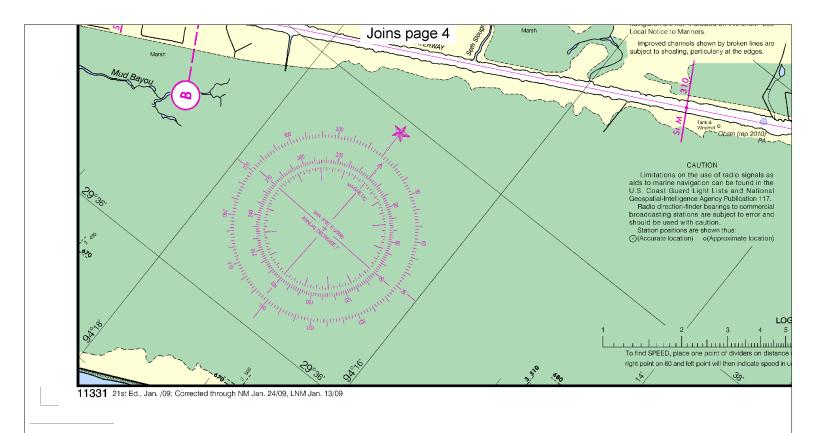
1000 0 1000 2000 3000 4000 5000











NAUTICAL CHART 11331

INTRACOASTAL WATERWAY

Heights in feet above Mean High Water.

AUTHORITIES

HEIGHTS

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.



Joins page 16

SUPPLEMENTAL INFORMATION

10

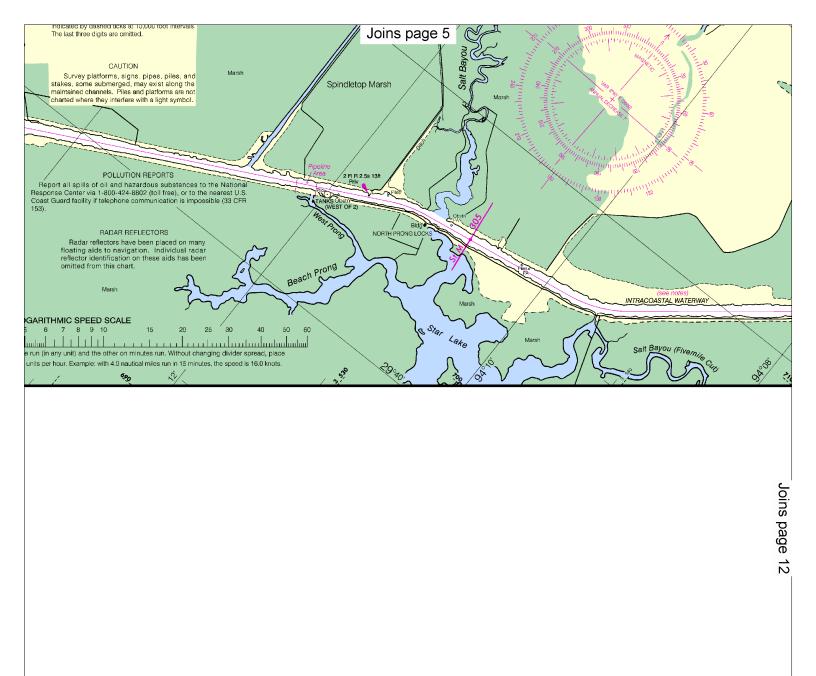
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

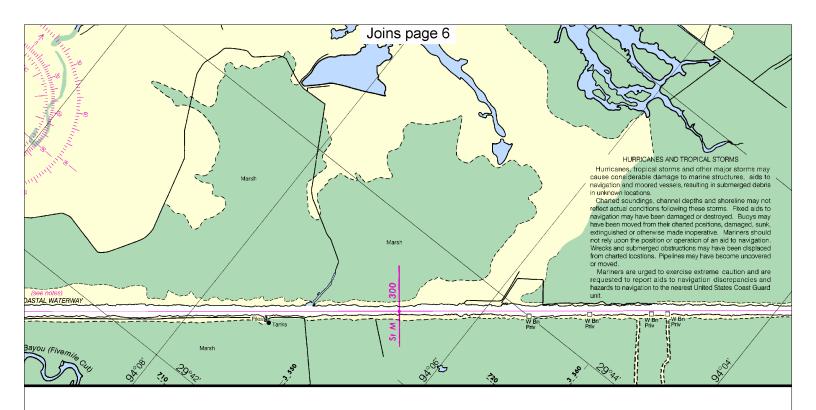
SCALE 1:40,000
Nautical Miles

Yards

1000 0 1000 2000 3000 4000 5000



AA WEATHER F	RADIO BROADCAST	S MHz)	BROADCAST TIMES	BROADCASTS OF MARINE WEATHER FORECASTS AND WARNINGS BY MARINE RADIOTELEPHONE STATIONS	
Iveston, TX	KHB-40	162.55	24 hours daily	CITY STATION FREQ. BROADCAST TIMES - CST SPECIAL WARNING	
ke Charles, LA	KHB-42	162.40	24 hours daily	Galveston, TX NOY 2670 kHz 4:45, 6:45 & 10:45 AM & 4:45 PM * On receipt	(L
aumont, TX	WXK-28	162.475	24 hours daily	Galveston, TX " 157.10 MHz 4:45, 6:45 & 10:45 AM & 4:45 PM	st
				Port Aransas, TX NOY-3 157.10 MHz 5;00 & 11:00 AM 5:00 PM * On receipt	re
RINE WEATHER				NOY 2670 kHz 4:40, 6:40 & 10:40 AM & 4:40 PM	Ro
TIONAL WEATHE				157.10 MHz 4:45, 6:45 & 10:45 AM & 4:45 PM	
CITY	TELEPHONE NUM		OFFICE HOURS	Joins page 17 157.10 MHz 4:45, 6:45 & 10:45 AM & 4:45 PM	Fe
	(227) 477 500	0.5	Od barwa dallir	0670 kHz 4:45 C:45 2 10:45 0M 2 4:45 DM	



LEPHONE STATIONS SPECIAL WARNING

* On receipt * On receipt PUBLIC BOATING INSTRUCTION PROGRAMS

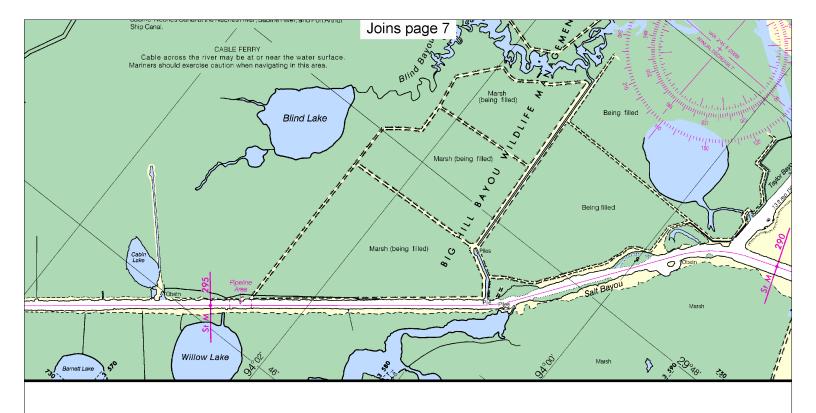
The United States Power Squadrons (USPS) and U.S. Coast Guard Auxiliary (USCGAUX), national organizations of boatmen, conduct extensive boating instruction programs in communities throughout the United States. For information regarding these educational courses, contact the following sources:

USPS - Local Squadron Commander or USPS Headquarters, 1504 Blue Ridge Road, Raleigh, NC 27607, 888-367-8777

USCGAUX - COMMANDER (OAX), Eighth Coast Guard District, F Joins page 18 Federal Building, Suite 1126, 500 Poydras Street, New Orleans,

	J 00	NON	11 2009		r Ci	SHOW	11 2009				1 2005			A-1411	2005	
	Time Day h.m.	Ht.	Day h.m.	Ht.	Time Day h-m-	Ht.	Day		Time Day h.m.		Day	Ht.	Time Day h.m.	Ht.	Day	F
	Th 0319 1223 -	0.6 0.7 0.2 0.9	16 0244 F 0857 1416 2024	0.1 0.6 0.3 0.7	I 0158 Su 0953 1313 1835	0.1 0.6 0.5 0.8	16 0332 M 1350	-0.4 1.0	I 0022 Su 0823 I234 I858	-0.2 .0 .8 .0	16 0124 M 1030	-0.2	I 0149 W 1132	-0.3 1.5	16 0219 Th 1301	0.
•	F 0544 1256	0.5 0.6 0.1 0.8	17 0349 Se 1117 1552 2035	-0.2 0.7 0.6 0.7	2 0254 M 1901	-0.4 0.8	17 0435 Tu 1505	1.0	2 0113 M 1001 1315 1840	-0.3 . .0 .1	17 0219 Tu 1304	-0.1 .3	2 0302 Th 1255	-0.2	17 0325 F 1319	0
8	Sa 0916	0.3 0.5 0.3	18 G445 Su 346	0.8	3 0355 Tu 7 4	-0.6 1.0	IB 0537 W 1555	-0.4 1.1	3 0213 Tu 1155 1355	-0.4 .2 .1	18 0325 W 1455	-0.1 1.3	3 0424 F 1334	-0.1 1.4	18 0436 Se 1324	0.

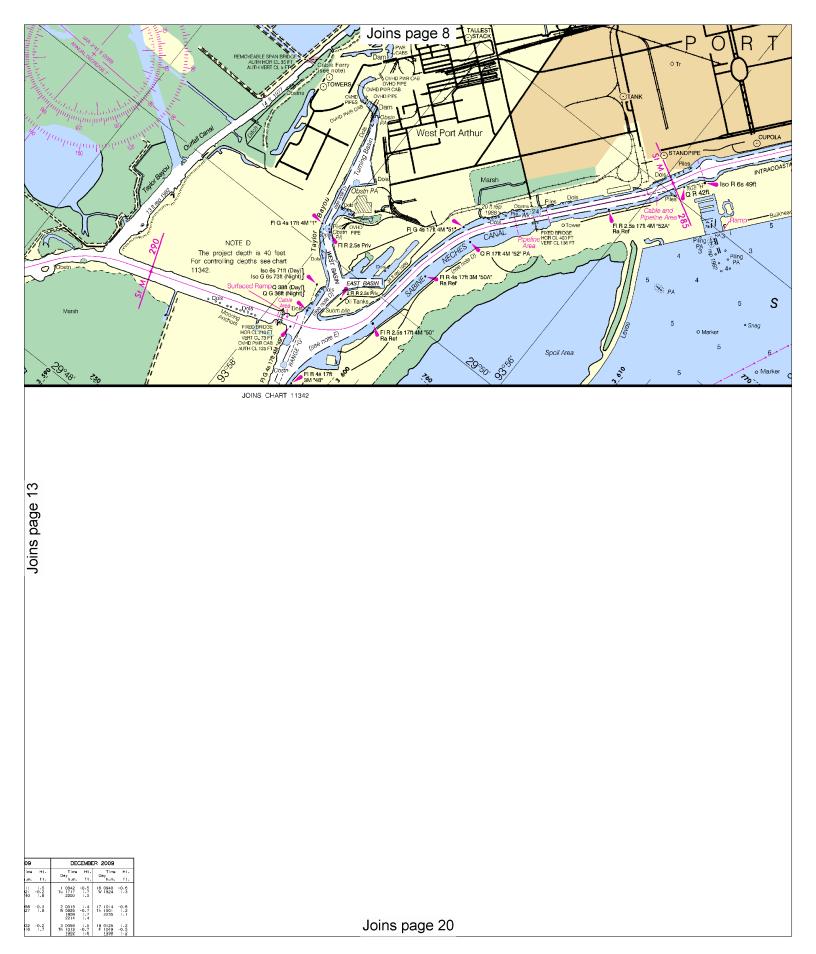
CALE 1:40,000 Nautica<u>l Miles</u> See Note on page 5. Printed at reduced scale. Note: Chart grid lines are aligned 1/2 0 Yards 1000 0 1000 4000 with true north. 2000 3000 5000

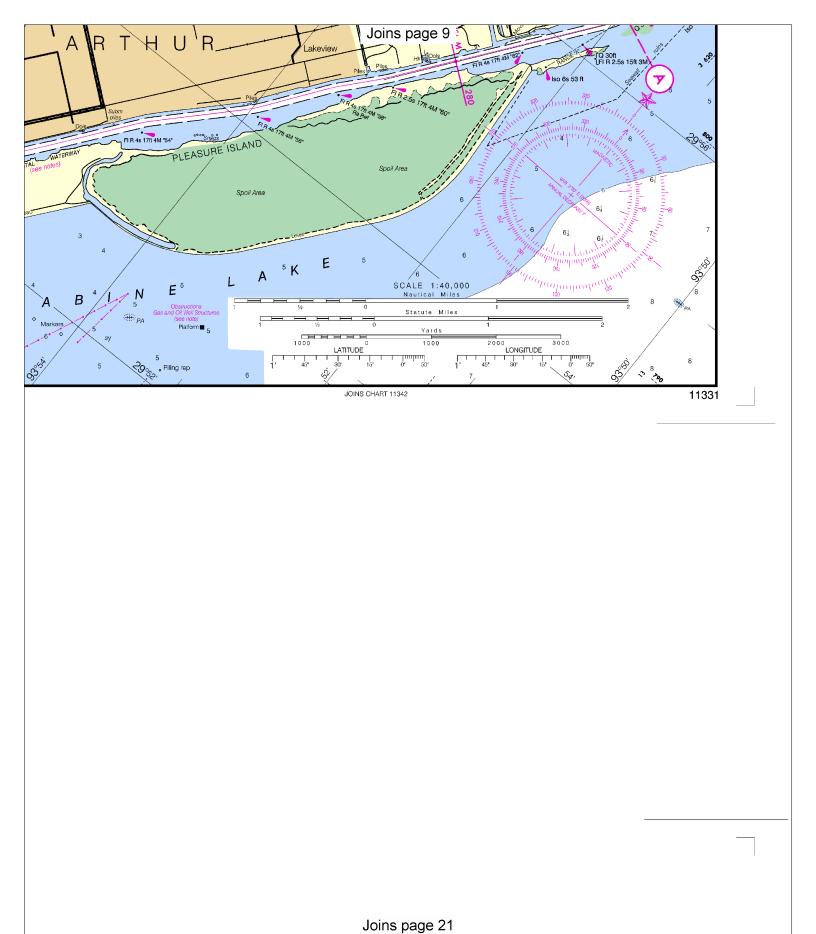


GALVESTON (Galveston Channel), TEXAS
Predicted times on hatchist of high and low youter-Cartral Standard Time. For Deptids Swing time, add I hour.
To predict local tide, apply the time difference isled in the Resility blacketion to these tide predictions.

	MAY 2009			١ ,	JUNE 2009			JULY 2009			AUGUS'		SEPTEMBER 2009						
Ht.	Day h.m.	Ht. ft.	Time Day h.m.	Ht.	Day h.m.	Ht.	Time Day h.m.	Ht.	Time Day h.m.	Ht.	Day	Ht. ft.	Time Ht. Day h.m. ft.	Day		Time Day h.m.	Ht.	Dev	-
0.2	0246 F 1140	0.0	16 0212 Sa 1117	0.3	I 0514 M 1108 1828	0-0	16 0240 Tu 1000 1733	0.7 . 0.3	I 0230 W 1831	-0.3	16 0659 Th 1705 -0	1.2	0424 1.5 Sa 1928 -0.3	16 0334 1.6 Su 1835 -0.4		1 0423 Tu 0909 1204 2023	1.5 1.4 0.2	16 0313 W 0758 1258 2024	
0.3	2 0408 Se 1212 1838 2224	0.2 1.4 1.1 1.2	17 0306 Su 1136 1929 2225	0.5 1.3 0.9 1.0	2 0136 Tu 0857 1123 1904	1.0	17 0111 W 0402 0952 1755	0.9	2 0334 Th 1911	-0.4	17 0246 I F 1755 -0	3.5	2 0501 1.4 Su 2008 -0.3	17 0355 6 M 0732 5 0948 6		2 0419 W 0901 1313	1.5 1.3 1.4 0.3	17 0328 Th 0839 1424 2116	1.
0.4	3 0531 Su 1233	0.5	18 0410 M 1148	0.7	3 0300 W 0933	1:4	18 0223 Th 0639	1.3	3 0420 F 1948	1.5	18 0325 I Sa 1847 -0	1.5	3 0524 1.4 M 2043 -0.3	Joins	pag	e 19	1.4	18 0343 F 0923	į.

	SEF	PTEME	3ER 2009	,	∝	CTOB	ER 2009		NO ₁	/EMB	ER 2009		DECEMB	ER 2009		
	Time Day h.m.	Ht.	Dev	Ht.	Time Day h.m.	Ht.	Dev	Ht.	Time Day h.m.	Ht.	Day	Ht.	Time Ht. Day h.m. ft.	Day	Ht.	
	Tu 0909 1204 2023	1.3	16 0313 W 0758 1258 2024	1.6 1.4 1.7 0.3	1 0253 Th 0834 1353 2026	1.6 1.2 1.8 0.9	16 0210 F 0830 1514 2117	.6 0.7 .8 .	1 0131 Su 0836 1620 2132	1.5 0.3 1.8 1.4	16 0111 M 0921 -0 1740	1.5 0.2 1.8	1 0842 -0.5 Tu 1717 1.7 2200 1.3	16 0940 W 1824	-0.6 .3	
	2 0419 W 0901 1313	1.5 1.3 1.4 0.3	17 0328 Th 0839 1424 2116	1.6 1.1 1.7 0.5	2 0258 F 0850 1458 2059	1.6	17 0224 Se 0906 1523 2211	1.5 0.4 1.9	2 0130 M 0907 1713 2212	1.5 0.1 1.9 1.5		0.3	2 0013 .4 W 0926 -0.7 1808 .7 2214 .4	17 1014 Th 1901 2235	-0.6 .2 .1	
g	e 19	1.4	18 0343 F 0923 1543	0.8 1.7	3 0304 Se 0912 1558	1.6 0.8 1.7	18 0236 Su 0943 1726	1.8 0.2 2.0	3 0130 Tu 0943 1806	1.6 -0.1 1.9		0.2	3 0058 .5 Th 1013 -0.7 1902 .6	18 0125 F 1049 1938	1.2 -0.5 1.2	





NAUTICAL CHART 11331

INTRACOASTAL WATERWAY



ELLENDER TO GALVESTON BAY

HEIGHTS

Heights in feet above Mean High Water

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 5 for important

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

and Edi abi he hel

Chart 11331 21st Ed., Jan. /09 ■
Corrected through NM Jan. 24/09, LNM Jan. 13/09

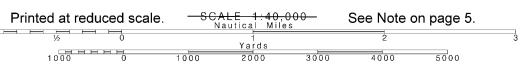
Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

MERCATOR PROJECTION SCALE 1:40,000 AT LAT. 29°38' SOUNDINGS IN FEET AT MEAN LOWER LOW WATER North American Datum of 1983 (World Geodetic System 1984)

Joins page 22

16

Note: Chart grid lines are aligned with true north.



Joins page 11

Morgans Point, TX Freeport, TX

NOAA WEATHER RADIO BROADCASTS

 CITY
 STATION
 MHz)
 BROADCAST TIMES

 Galveston, TX
 KHB-40
 162.55
 24 hours daily

 Lake Charles, LA
 KHB-42
 162.40
 24 hours daily

 Beaumont, TX
 WXK-28
 162.475
 24 hours daily

MARINE WEATHER FORECASTS NATIONAL WEATHER SERVICE

CITY TELEPHONE NUMBERS OFFICE HOURS
Lake Charles, LA (337) 477-5285 24 hours daily
*(337) 439-0000

Houston, TX *(281) 337-5074

*Recording (24 hours daily)

Additional information can be obtained at nauticalcharts.noaa.gov.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners nd critical corrections. Charts are printed when ordered using Print-on-Demand technology. New ditions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent bout Print-on-Demand charts or contact NOAA at 1-800-584-4683, http://NauticalCharts.gov,elp@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, http://OceanGrafix.com, or elp@OceanGrafix.com.

BROADCASTS OF I	MARINE WE	ATHER FOREC.	ASTS AND WARNINGS BY MARINE	RADIOTELEPHONE STATIONS
CITY	STATION	FREQ.	BROADCAST TIMES - CST	SPECIAL WARNING
Galveston, TX	NOY	2670 kHz	4:45, 6:45 & 10:45 AM & 4:45 PM	* On receipt
Galveston, TX	ш	157.10 MHz	4:45, 6:45 & 10:45 AM & 4:45 PM	
Port Aransas, TX	NOY-3	157.10 MHz	5;00 & 11:00 AM 5:00 PM	* On receipt
	NOY	2670 kHz	4:40, 6:40 & 10:40 AM & 4:40 PM	
Pecan Island, LA	11	157.10 MHz	4:45, 6:45 & 10:45 AM & 4:45 PM	
Cameron, LA		157.10 MHz	4:45, 6:45 & 10:45 AM & 4:45 PM	
Sabine, TX		2670 kHz	4:45, 6:45 & 10:45 AM & 4:45 PM	
Sabine, TX		157.10 MHz	4:45, 6:45 & 10:45 AM & 4:45 PM	

4:45, 6:45 & 10:45 AM & 4:45 PM

4:45, 6:45 & 10:45 AM & 4:45 PM

*Preceded by announcement on 2182 kHz and 156.8 MHz Distress calls for small craft are made on 2182 khz or channel 16 (156.80 MHz) VHF.

157.10 MHz

157.10 MHz

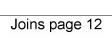
Joins page 18 NTINUED ON CHART 11326 29°30' 3.360 6 1:40,000 al Miles te Miles 3000 Subm MOODYS pipe PASS LONGITUDE 30" 15" 61 5 MS 61 5 Subm piles (ORILE 3 GALVESTON BAY Marsh Junginginging Joins page 23

The (USC) struction regardi

USF Road,

US0 Federa 800-52

Secor



LEPHONE STATIONS SPECIAL WARNING * On receipt

* On receipt

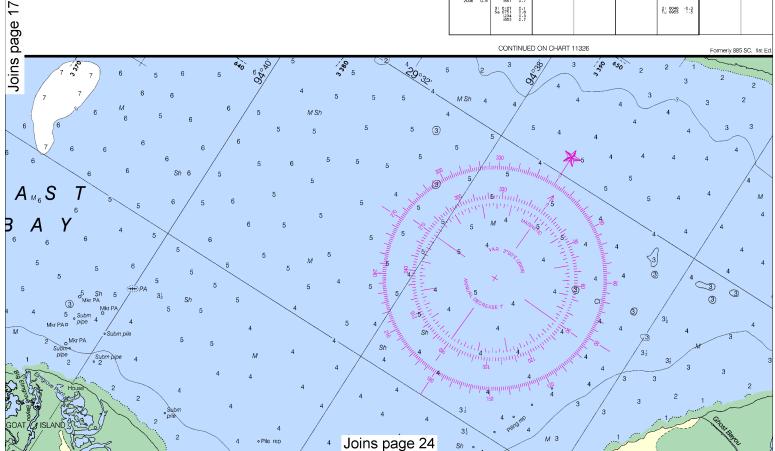
PUBLIC BOATING INSTRUCTION PROGRAMS

The United States Power Squadrons (USPS) and U.S. Coast Guard Auxillary (USCGAUX), national organizations of boatmen, conduct extensive boating instruction programs in communities throughout the United States. For information regarding these educational courses, contact the following sources:

USPS - Local Squadron Commander or USPS Headquarters, 1504 Blue Ridge Road, Raleigh, NC 27607, 888-367-8777

USCGAUX - COMMANDER (OAX), Fighth Coast Guard District, Hale Boggs Federal Building, Suite 1126, 500 Poydras Street, New Orleans, LA 70130, 800-524-8835 or USCG Headquarters, Office of the Chief Director (G-OCX), 2100 Second Street, SW, Washington, DC 20593

JANUA	RY 2009	FEBRUA	RY 2009	MARCH 2009	APRIL 2009
Time Ht.	Time Ht.	Time Ht.	Time Ht.	Time Ht. Time Ht.	Time Ht. Time h
h.m. ft.	h.m. ft.	h.m. ft.	h.m. ft.	h.m. ft. h.m. ft.	h.m. ft. h.m.
I 0106 0.6 Th 0319 0.7 1223 -0.2 2034 0.9	16 0244 0.1 F 0857 0.6 1416 0.3 2024 0.7	I 0158 -0.1 Su 0953 -0.6 I313 -0.5 I835 -0.8	16 0332 -0.4 M 1350 1.0	1 0022 -0.2	0149 -0.3 16 0219 0. W 32 1.5 Th 301 1.
2 0228 0.5 F 0544 0.6 1258 0.1 2045 0.8	17 0349 -0.2 Se 1117 0.7 1552 0.6 2035 0.7	2 0254 -0.4 M 1901 0.8	17 0435 -0.4 Tu 1505 1.0	2 0113 -0.3 17 0219 -0.1 M 1001 1.1 Tu 1304 1.3 1315 1.0 1840 1.1	2 0302 -0.2 17 0325 0. Th 1255 1.5 F 1319 1.
3 0319 0.3 Se 0916 0.5 1339 0.3 2046 0.8	8 0445 -0.4 Su 346 0.8	3 0355 -0.6 Tu 7 4 1.0	18 0537 -0.4 W 1555 1.1	3 0213 -0.4 18 0325 -0.1 Tu 1155 1.2 W 1455 1.3 1355 1.1 1827 1.2	3 0424 -0.1 18 0436 0. F 1334 1.4 Se 1324 1.
4 0402 0.0 Su 1144 0.6 1436 0.5 2034 0.8	19 0536 -0.5 M 1505 1.0	4 050 -0.7 W 452 1.1	19 0634 -0.4 Th 1633 1.0	4 0323 -0.5 19 0439 0.0 W 1400 1.2 Th 1532 1.3	4 0546 0.0 19 0543 0. Se 1356 1.4 Su 1331 1. 1926 1.1 1955 1. 2318 1.3 2355 1.
5 0446 -0.3 M 1330 0.9 1627 0.8 1955 0.9	20 0622 -0.6 Tu 1554 1.0	5 0808 -0.9 Th 533 .	20 0723 -0.4 F 1648 1.0	5 0440 -0.5 20 0549 0.0 Th 1444 1.3 F 1533 1.2	5 0659 0.2 20 0542 0. Su 1413 .3 M 1336 . 1947 0.9 1943 0.
6 0533 -0.5 Tu 1435 1.1	21 0706 -0.7 W 1635 1.0	6 0709 -1.0 F 1808 1.1 2003 1.0 2308 1.1	21 0805 -0.4 Se 1842 1.0 2034 0.9	6 0556 -0.5 F 1507 1.3 Se 1518 1.2 2039 1.0 2323 1.1	6 0102 1.3 21 0122 1. M 0602 0.3 Tu 0736 0. 1428 1.3 1344 1. 2019 0.7 1953 0.
7 0624 -0.8 W 1526 1.2	22 0746 -0.7 Th 1708 1.0	7 0908 -1.0 Se 1538 1.1 2026 0.9	22 0019 1.0 Su 0840 -0.4 1641 0.9 2038 0.8	7 0705 -0.5 22 0733 0.1 Se 1526 1.2 Su 1514 1.1 1950 1.0 2018 1.0	7 0225 1.4 22 0233 1. Tu 0859 0.5 W 0827 0. 1442 1.2 1348 1. 2054 0.4 2015 0.
8 0717 -1.0 Th 1613 1.3	23 0824 -0.7 F 1728 0.9 2119 0.8 2355 0.9	8 0043 1.1 Su 0903 -0.9 1704 1.0 2109 0.8	23 0122 1.0 M 0911 -0.3 1647 0.9 2109 0.7	8 0002 1.2 23 0048 1.1 Su 0805 -0.4 M 0812 0.2 1544 1.1 1518 1.1 2024 0.9 2027 0.8	8 0337 1.5 23 0335 1.5 0952 0.8 Th 0919 1.5 1.2 1350 1.2 128 0.2 2044 0.
9 0811 -1.1 F 1656 1.3 2102 1.1	24 0858 -0.7 Se 1740 0.9 2042 0.8	9 0203 1.1 M 0954 -0.8 1727 0.9 2158 0.6	24 0222 1.0 Tu 0940 -0.2 1656 0.9 2144 0.6	9 0131 1.2 24 0158 1.2 M 0900 -0.2 Tu 0848 0.3 1500 1.1 1524 1.1 2105 0.6 2049 0.6	9 0442 1.6 24 0432 1.7 1043 1.0 F 1010 1.0 1506 1.2 1349 1.2 1202 0.0 2119 -0.
10 0006 1.2 Se 0905 -1.2 1740 1.2 2127 1.0	25 0052 0.9 Su 0929 -0.7 1752 0.9 2109 0.8	10 0320 1.0 Tu 1042 -0.5 1747 0.9 2252 0.4	25 0323 0.9 W 1011 -0.1 1706 0.9 2220 0.4	10 0250 1.2 25 0303 1.2 Tu 0949 0.0 W 0924 0.4 1818 1.0 1531 1.1 2147 0.4 2117 0.4	10 0541 1.6 25 0527 1. F 1135 1.1 Se 1100 1. 1513 1.3 1348 1. 2236 -0.1 2159 -0.
11 0124 1.2 Su 0958 -1.1 1818 1.1 2209 0.9	26 0139 0.9 M 0959 -0.6 1807 0.8 2153 0.7	II 0438 1.0 W 1129 -0.2 1907 0.8 2346 0.2	26 0429 0.9 Th 1043 0.1 1714 0.9 2258 0.2	II 0404 I.3 26 0406 I.3 W 1037 0.2 Th 1002 0.6 I631 I.0 I535 I.1 2230 0.2 2149 0.2	II 0638 I.6 26 0623 I. Se 1232 I.2 Su 2245 -0. I509 I.3 2312 -0.
12 0237 1.1 M 1050 -0.9 1851 1.0 2306 0.7	27 0227 0.8 Tu 1028 -0.5 1823 0.8 2241 0.6	12 0600 0.9 Th 1215 0.1 1824 0.6	27 0539 0.9 F 1117 0.3 1717 0.9 2338 0.0	12 0518 1.3 27 0508 1.4 Th 1123 0.5 F 1043 0.8 1845 1.0 1537 1.1 2311 0.0 2225 0.0	12 0734 1.6 27 0724 1.6 28 2355 -0.1
13 0352 1.0 Tu 1140 -0.7 1920 0.9	28 0322 0.8 W 1057 -0.4 1636 0.8 2330 0.5	13 0041 0.0 F 0729 0.8 1303 0.4 1937 0.8	28 0657 1.0 Sa 1155 0.6 1713 0.9	13 0527 1.3 28 0611 1.5 F 1211 0.7 Se 1125 1.0 1855 1.0 1534 1.2 2353 -0.1 2306 -0.2	I3 0833 .6 28 0830 . M
14 0015 0.5 W 0516 0.8 1230 -0.4 1945 0.8	29 0432 0.7 Th 27 -0.2 850 0.7	14 0136 -0.2 Se 0911 0.8 1400 0.6 1842 0.8		14 0740 1.3 29 0718 1.5 Se 1304 0.9 Su 1209 1.2 1856 1.0 1525 1.3 2352 -0.3	14 0032 0.0 29 0031 -0. Tu 0942 1.5 W 0942 1.
15 0130 0.3 Th 0657 0.7 1320 0.0 2006 0.8	30 0019 0.3 F 0602 0.6 I 159 0.0 I 857 0.7	15 0232 -0.3 Su 1113 0.9		15 0036 -0.2 30 0631 1.5 Su 0656 1.3 M 1252 1.3 1518 1.4	15 0121 0.1 30 0135 -0. W 1111 1.5 Th 1051 1.
	31 0107 0.1 Sa 0751 0.6 1234 0.3 1853 0.7			31 0046 -0.3 Tu 0955 1.5	



18

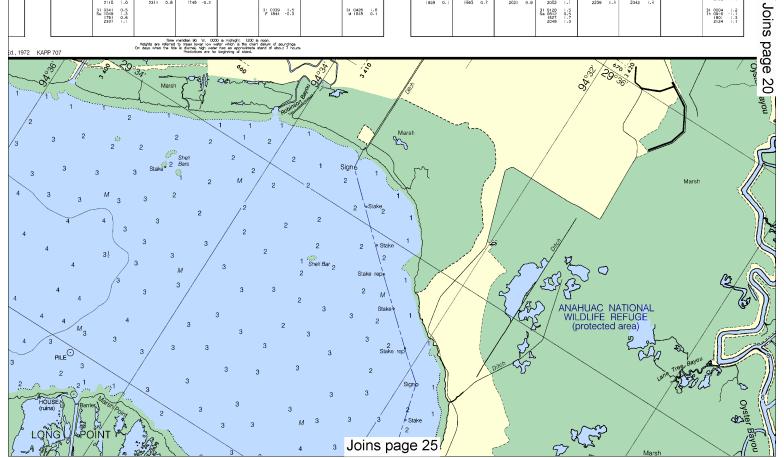
CALE 1:40,000 Nautica<u>l Miles</u> Printed at reduced scale. See Note on page 5. Note: Chart grid lines are aligned Yards 1000 0 1000 3000 4000 5000 with true north. 2000

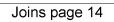
GALVESTON (Galveston Channel), TEXAS
Predicted times and heights of high and low water-Central Standard Time. For Deptids Saving time, add I hour.
To predict local tide, apply the time difference isled in the feolity betwiction to have tide predictions.

MAY	2009			JUNE	2009			JULY	2009		A	ugus:	T 2009	
Time Ht. Day h.m. ft.	Time Day h.m.	Ht.	Time Day h.m.	Ht.	Time Day h.m.	Ht.	Time Day h.m.	Ht.	Time Day h.m.	Ht.	Time Day	Ht.	Day h.m.	Ht.
1 0246 0.0 F 1140 1.5	16 0212 Sa 1117	0.3	I 0514 M 1108 1828	0.8 1.2 0.3	16 0240 Tu 1000 1733	0.7	1 0230	-0.3	16 0659	1.2	1 0424	-0.3	16 0334	1.6
2 0406 0.2 Se 1212 1.4 1838 1.1 2224 1.2	17 0306 Su 1136 1929 2225	0.5 1.3 0.9 1.0	2 0136 Tu 0857 1123 1904	1.2	17 0111 W 0402 0952 1755	0.9 1,1 0.0	2 0334 Th 1911	-0.4	17 0246 F 1755	1.3	2 0501 Su 2008	1.4 -0.3	17 0355 M 0732 0948 1934	1.6 1.5 1.6 -0.5
3 0581 0.5 Su 1233 1.4 1901 0.8	18 0410 M 1148 1851	0.7 .3 0.7	3 0300 W 0933 1131 1938	1.4	18 0223 Th 0639 0913 1828	.3 . .2 -0.3	3 0420 F 1948	-0.5	18 0325 Se 1847	0.7	3 0524 M 2043	-0.3	18 0416 Tu 0756 1158 2030	1.8 1.8 -0.4
4 0029 1.3 M 0652 0.7 1250 1.3 1981 0.5	19 0032 Tu 0530 1154 1851	0.9 1.2 0.5	4 0359 Th 2010	1.5	19 0315 F 1909	1.5 -0.5	4 0459 Sa 2023	-0.5	19 040 6 Su 1941	1.6	4 0531 Tu 0937 1226 2114	1.3 1.2 1.3 -0.2	19 0436 W 0842 1331 2122	.5 .3 .6 -0.3
5 0203 1.4 Tu 0808 0.9 1304 1.3 2002 0.3	20 0156 W 0659 1155 1910	1.3 1.0 1.2 0.2	5 0445 F 2041	1.6 -0.4	20 0401 Sa 1954	1.6 -0.7	5 0532 Su 2057	-0.5	20 0445 M 0841 I 101 2035	1.6 1.4 1.5 0.8	5 0536 W 0935 1325 2142	1.3 1.2 1.3 -0.1	20 0456 Th 0934 1455 2212	1.4 1.5 0.0
6 0318 1.6 W 0913 1.1 1315 1.3 2033 0.0	21 0259 Th 0825 1150 1939	.5 .2 .3 -0.	6 0524 Se 2112	1.8 -0.4	21 0447 Su 2043	-0.8	8 0558 M 2129	-0.4	1246	1.5 1.4 1.5 0.8	6 0545 Th 1010 1421 2208	1.3 1.1 1.2 0.0	21 0515 F 1027 1818 2300	0.8 1.5 0.3
7 0418 1.7 Th 1017 1.2 1323 1.3 2104 -0.1	22 0353 F 2015	-0.3	7 0559 Su 2144	-0.4	22 0534 M 2134	-0.9	7 0620 Tu 1032 1219 2200	.3 .2 .3 -0.4	22 0553 W 0947 1404 2220	1.4 1.3 1.4 0.6	7 0558 F 1053 1523 2235	1.0	22 0533 Sa 1122 1744 2349	0.6 1.4 0.6
8 0509 1.7 F 1122 1.3 1322 1.4 2134 -0.2	23 0443 Sa 2057	-0.5	8 0632 M 2217	-0.3	23 0621 Tu 1029 1317 2227	.6 .4 .5 -0.8	8 0641 W 1032 1313 2231	.3 . .2 -0.3		1.3 1.1 1.3 0.3	8 0611 Se 1135 1636 2303	1.2 0.8 1.0 0.3	23 0549 Su 1216 1915	0.4
9 0554 1.8 Se 2206 -0.2	24 0594 Su 2143	1.9 -0.6	9 0708 Tu 2252	1.5 -0.3	24 0705 W 0 43 2320	.5 .3 .4 -0.6	9 0703 Th 1119 1350 2300	1.0	24 0848 F 1150 1658	1.3 0.8 1.2	9 0622 Su 1216 1804 2332	1.2 0.7 1.0 0.5	24 0040 M 0603 1311 2056	0.9 .3 0.2 .4
10 0637 1.7 Su 2240 -0.2	25 D827 M 2233	-0.6	10 0746 W 2327	1.4	25 0744 Th 1215 1553	1.2	10 0724 F 2329	-0.1	25 0000 Se 0708 1258 1840	0.0 1.2 0.6	10 0628 M 1257 1946	1.2 0.5 1.0	25 0143 Tu 0608 1408 2256	1.2 1.3 0.1
H 2316 -0.1	26 0722 Tu 2326	-0.6	11 0822 Th	1.4	26 0013 F 0817 1340 1738	-0.4 .3 .0 .	II 0744 Se 2358	0.1	26 0050 Su 0728 1406 2037	0.3 1.2 0.3 1.0	II 0003 Tu 0624 I341 2141	0.8 1.2 0.3	26 1509 W	0.0
12 0809 1.8 Tu 2355 0.0	27 D918 W	1.7	12 0002 F 0855	1.3	27 0106 Sp 0844	0.0	12 0600 Su 1434 1833	0.6 0.7	27 0145 M 0745 1510 2252	0.7 1.1 0.1	12 0033 W 0604 1430	1.2	27 0115 Th 1613	0.0
13 0903 1.5 W	28 0023 Th 0910	-0.4 1.6	13 0036 Se 0923	0.1	28 0204 Su 0907	0.3	13 0028 M 0610 1507 2116	0.4 . 0.5 0.7	28 0309 Tu 0754 1609	1:0	3 0536 Th 526	-0.1	28 0236 F 1717	0.0
14 0038 0.1 Th 1000 1.5	29 D122 F D953	-0.1 1.5	14 0112 Su 0943	0.3	29 0315 M 0926	0.7	14 0059 Tu 0909 54	0.6	29 0119 W 1704	1.3	14 0521 F 1628	1.5 -0.2	29 0328 Sa 1816	0.0
IS 0123 0.2 F 1047 1.4	30 0227 Sa 1025 1712 2110	0.2 .4 0.9 .0	15 0150 M 0956 1731 2311	0.5 1.2 0.5 0.8	30 0040 Tu 0517 0940 1749	. .0 .1 -0.2	IS 0749 W 621	0.0	30 0245 Th 1756	0.3	15 0504 Se 1732	-0.4	30 0408 Su 1908	0.1
	31 D341 Su 1049 1751 2337	0.5 .3 0.6 .							31 0339 F 1844	0.3			31 0426 M 1948	0.1

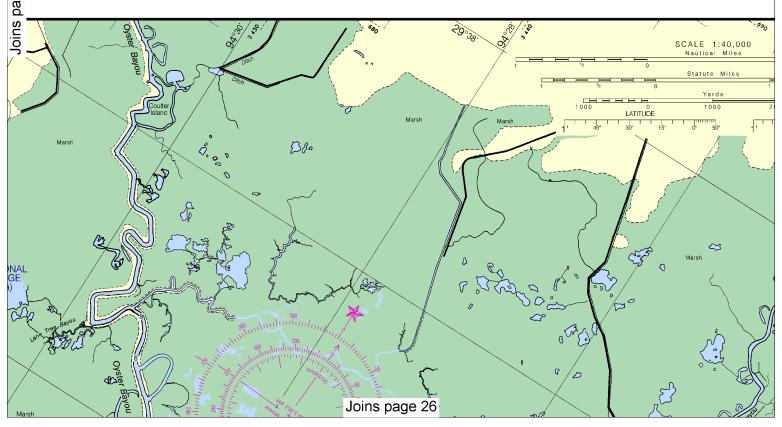
-0.2 |.6

	SEF	TEME	BER 2009		α	стова	R 2009		NO/	/EMBE	R 2009		DECEMBER 2009			
- 1	Time Day	Ht.	Time Day	Ht.	Time Day	Ht.	Time Day	Ht.	Time Dey	Ht.	Time Day	Ht.	Time Day	Ht.	Time Day	Ht.
-	h.m.	ft.	h.m.	ft.	h.m.	n.	h.m.	ft.								
	I 0423 Tu 0909 I204 2023	1.5 1.3 1.4 0.2	16 0313 W 0758 1258 2024	1.6 1.4 1.7 0.3	I 0253 Th 0834 I 353 2026	1.6 1.8 0.8	16 0210 F 0630 1514 2117	1.6 0.7 1.8 1.1	1 0131 Su 0835 1620 2132	1.5 0.3 1.8 1.4	16 0111 M 0921 1740	1.5 -0.2 1.8	I 0842 Tu 1717 2200	-0.5 .7 .3	16 0940 W 1824	-0.6 1.3
	2 0419 W 0901 1313 2052	1.5 1.3 1.4 0.3	17 0328 Th 0839 1424 2116	1.6 1.1 1.7 0.5	2 0258 F 0850 1458 2059	1.6 1.0 1.6	17 0224 Se 0906 1523 2211	1.5 0.4 1.9 1.3	2 0130 M 0907 1713 2212	1.5 0.1 1.9 1.5	17 0956 Tu 1827	-0.3 .8	2 0013 W 0926 1808 2214	-0.7 .7 .7	17 1014 Th 1901 2235	-0.6 .2 .1
	3 0422 Th 0918 1416 2120	.4 .2 .4 .4	18 0343 F 0923 1543 2206	0.8 1.7 0.8	3 0304 Se 0912 1558 2133	1.6 0.8 1.7	18 0236 Su 0943 1726 2304	1.8 0.2 2.0 1.5	3 0130 Tu 0943 1806 2246	1.6 -0.1 1.9 1.6	18 1032 W 1916	-0.2	3 0058 Th 1013 1902 2235	-0.7 .6 .4	18 0125 F 1049 1938 2245	-0.5 -1.2 -1.0
	4 0429 F 0946 519 2147	1.4 1.0 1.4 0.5	19 0358 Se 1007 1858 2255	0.6 1.8 1.0	4 0309 Su 0940 1658 2209	1.6 0.6 1.7	19 0248 M 1020 1828	1.6 0.1 2.0	4 0135 W 1025 1905 2312	1.7 -0.2 1.9	19 1110 Th 2009	-0.2 .6	4 0148 F 1103 1957 2310	1.5 -0.7 1.5	19 0155 Se 1123 2012 2331	-0.4 -1.1 -1.0
	5 0438 Sa 1017 1624 2216	1.4 0.8 1.4 0.7	20 0412 Su 1050 1813 2347	1.5 0.4 1.8 1.3	5 0311 M 1011 1758 2246	1.6 0.4 1.8 1.5	20 0001 Tu 0246 1059 1928	1.8 1.7 0.1 1.9	5 0153 Th 1112 2011 2336	1.8 -0.2 1.9 1.7	20 150 F 2110 2350	-0.1 1.5 1.4	5 0239 Sa 1157 2048	1.5 -0.5 1.4	20 02 Su 1156 204	1.1 -0.3 1.1
	6 0446 Su 1050 1732 2248	1.4 0.7 1.4 0.9	21 0423 M 1135 1929	.6 0.2 .8	6 0307 Tu 1048 1901 2322	1.6 0.2 1.9 1.6	21 1140 W 2031	0.1	6 0221 F 1205 2126	1.8 -0.2 1.8	2 0 37 Sa 232 22	0.0 1.5	6 0014 Su 0333 1252 2128	.3 .4 -0.3 .3	21 1229 M 2105	-0.1 1.0
	7 0449 M 1125 1846 2322	1.4 0.5 1.4	22 0045 Tu 0424 1221 2051	1.5 1.6 0.2	7 0300 W 1130 2013 2354	1.7 0.1 1.9 1.7	22 1225 Th 2152	0.2	7 0008 Sa 0250 1303 2238	1.7 1.8 -0.1	22 3 6 Su 2249	0.2	7 0218 M 0501 1352 2158	.0 . -0. .2	22 1302 Tu 2125	0.0
	8 0444 Tu 1204 2008 2356	1.4 0.3 1.5 1.3	23 3 W 2229	0.2	8 0259 Th 1220 2138	1.8 0.1 1.9	23 1315 F	0.3	8 0127 Su 0255 1409 2322	1.6 1.7 0.1 1.7	23 402 M 2309	0.3	8 0418 Tu 0806 1500 2221	0.8 0.9 0.3	23 1336 W 2139	0.2
	9 0429 W 1250 2143	1.5 0.2 1.6	24 1408 Th	0.3	9 0019 F 0310 1318	.8 .9 .1	24 0111 Se 1413	1.8 0.4	9 523 M 2347	0.3	24 453 Tu 2323	0.5	9 0512 W 1045 1626 2241	0.5 0.9 0.6	24 0516 Th 1046 1418 2145	0.3 0.6 0.5 0.9
	10 0027 Th 0415 1344	1.5 1.6 0.1	25 0056 F 1514	0.3	IQ 0326 Se 1426	0.2	25 0136 Su 1517	0.5	10 0626 Tu 0919 1644	1.3	25 0723 W 1012 1553 2333	0.8 0.9 0.6 1.2	10 0557 Th 1255 1814 2258	0.2 .0 .8 .	25 0523 F 1257 1527 2141	0.1 0.7 0.6 0.9
	II 0415 F 1449	0:0	26 0220 Se 1627	0.4	0308 Su 542	0.2	26 0118 M 1625	0.5	(1 0006 W 0636 1146 1806	1.5 1.0 1.3 0.8	28 0653 Th 224 709 234	0.7 1.0 0.8 1.2	II 0837 F 1428 1954 2312	-0. .2 .0	26 0545 Se 1415 1801 2108	-0.2 0.9 0.8 0.9
	12 0426 Sa 1602	0.0	27 0257 Su 1734	0.4	12 0118 M 1702	0.3	27 0112 Tu 1729	0.7	12 0022 Th 0705 1331 1924	1.4 0.8 1.4 1.0	27 0553 F 1350 1835 2344	0.4 1.2 1.0	12 0715 Sa 1534 2120 2323	-0.4 .4 .0	27 0617 Su 1505	-0.4 1.1
	13 0400 Su 1716	0.0	28 0304 M 1831	0.5	13 0130 Tu 0715 1023 1816	1.8 1.5 1.6 0.5	28 0113 W 0758 1149 1824	1.8 1.2 1.3 0.8	13 0037 F 0738 1451 2034	1.4 0.3 1.6 1.2	28 0707 Se 1452 1955 2342	0.2 1.3 1.1 1.2	13 0753 Su 1624	-0.5 1.4	28 0656 M 1548	-0.7 1.2
	14 0251 M 1826	0.0	29 0255 Tu 0847 III4	.7 .4 .5	14 0143 W 0724 1225 1921	1.7 1.3 1.6 0.7	29 0118 Th 0749 1318 1915	1.5	14 0050 5e 0812 1556 2139	1.4 0.1 1.7 1.3	29 0732 Su 1542 2059 2337	-0.1 1.5 1.2 1.3	14 0829 M 1707	-0.6 .4	29 0739 Tu 1632	-0.9 .3
	15 0300 Tu 0726 1113 1928	1.7 1.6 1.7 0.1	30 D251 W 0831 1242 1953	1.6 1.4 1.5 0.7	15 0157 Th 0754 1357 2021	.6 .0 .7 0.9	30 0123 F 0755 1428 2002	1.5 0.8 1.5	15 0102 Su 0846 1651 2239	1.4 -0.1 1.8 1.4	30 0804 M 1629 2141 2342	-0.3 .6 .3 .4	15 0904 Tu 1747	-0.6 .4	30 0827 W 1717 2102	-1.0 1.3 1.1
							31 0128 5e 0612 1527 2048	1.5 0.5 1.7 1.3							31 0004 Th 0916 1801 2124	.2 .1 .3 .1



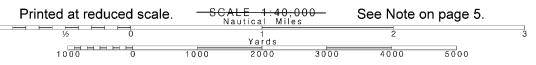


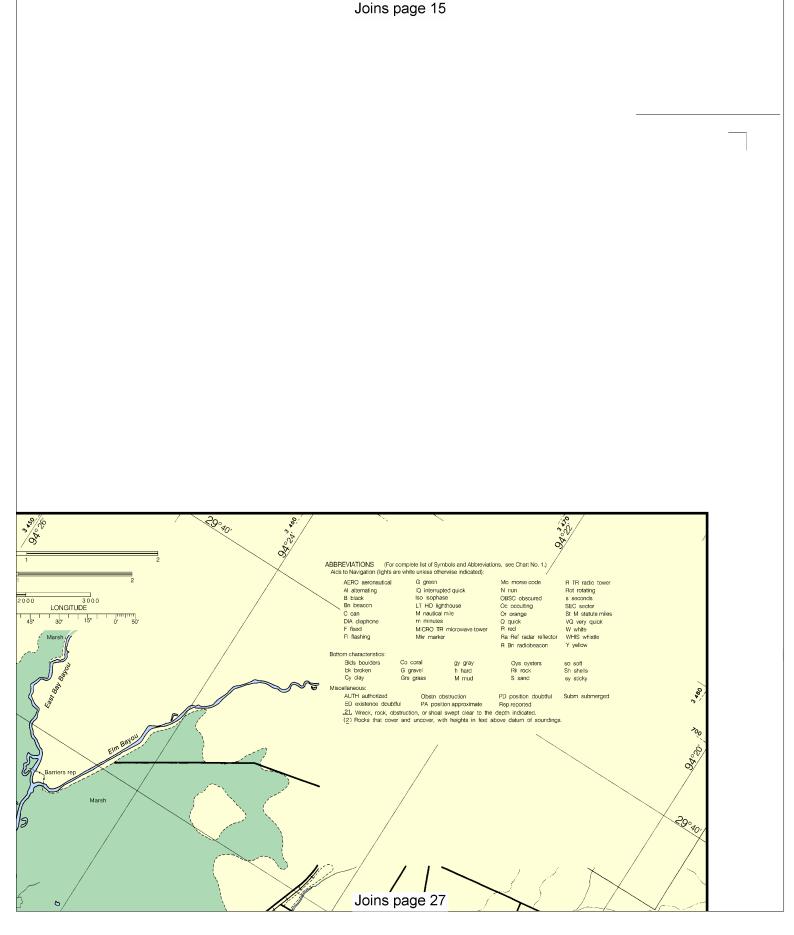
09	DE	CEMBE	ER 2009	
ime Ht	Day		Day h.m.	Ht.
i.m. ft	1 0842	71.	h.m. 16 0940	ft.
11 1.5 21 -0.2 40 1.8	I 0842 Tu 1717 2200	-0.5 .7 .3	W 1824	-0.6
56 -0.3 27 1.8	2 0013 W 0926 1808 2214	-0.7 -1.7 -1.4	17 1014 Th 1901 2235	-0.6 .2 .1
32 -0.2 16 1.7	3 0058 Th 1013 1902 2235	-0.7 -6 -4	18 0125 F 1049 1938 2245	-0.5 -0.5
10 -0.2 09 .6	4 0148 F 1103 1957 2310	-0.7 -5 -5 -4	19 0155 Se 1123 2012 2331	-0.4 -0.1
50 -0.1 10 1.5 50 1.4	5 0239 Sa 1157 2048	-0.5 1.4	20 0211 Su 1156 2041	-0.3
37 .5 32 0.0	6 0014 Su 0333 1252 2128	.3 .4 -0.3 .3	21 1229 M 2105	-0.1 1.0
16 0.2 49 1.4	7 0218 M 0501 1352 2158	.0 . -0. .2	22 1302 Tu 2125	0.0
02 0.3 09 1.4	8 0418 Tu 0806 1500 2221	0.8 0.9 0.3	23 1336 W 2139	0.2
53 0.5 23 1.3	9 0512 W 1045 1626 2241	0.5 0.9 0.6	24 0516 Th 1046 1418 2145	0.3 0.6 0.5 0.9
23 0.8 12 0.9 53 0.6 33 1.2	10 0557 Th 1255 1814 2258	0.2 1.0 0.8	25 0523 F 1257 1527 2141	0.1 0.7 0.6 0.9
53 0.7 24 1.0 09 0.8 41 1.2	II 0837 F 1428 1954 2312	-0. .2 .0	26 0545 Se 1415 1801 2108	9.0 9.0 8.0 9.0
53 0.4 50 1.2 35 1.0 44 1.2	12 0715 Se 1534 2120 2323	-0.4 .4 .0 .1	27 0617 Su 1505	-0.4 .1
07 0.2 52 1.3 55 1.1 42 1.2	13 0753 Su 1624	-0.5	28 0656 M 1548	-0.7
32 -0.1 42 .5 59 .2 37 .3	14 0829 M 1707	-0.6 .4	29 0739 Tu 1632	-0.9 .3
04 -0.3 29 1.6 41 1.3	15 0904 Tu 1747	-0.6 .4	30 0827 W 1717 2102	-1.0 .3 .1
19			31 0004 Th 0916 1801	.2 .1 .3
age			2124	1.1

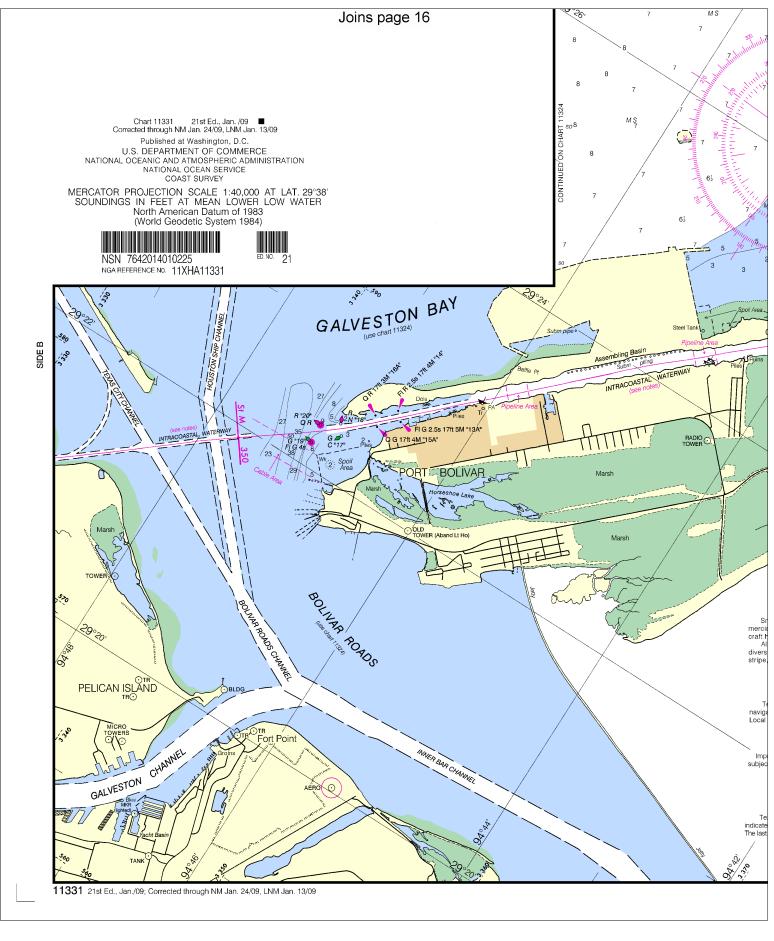


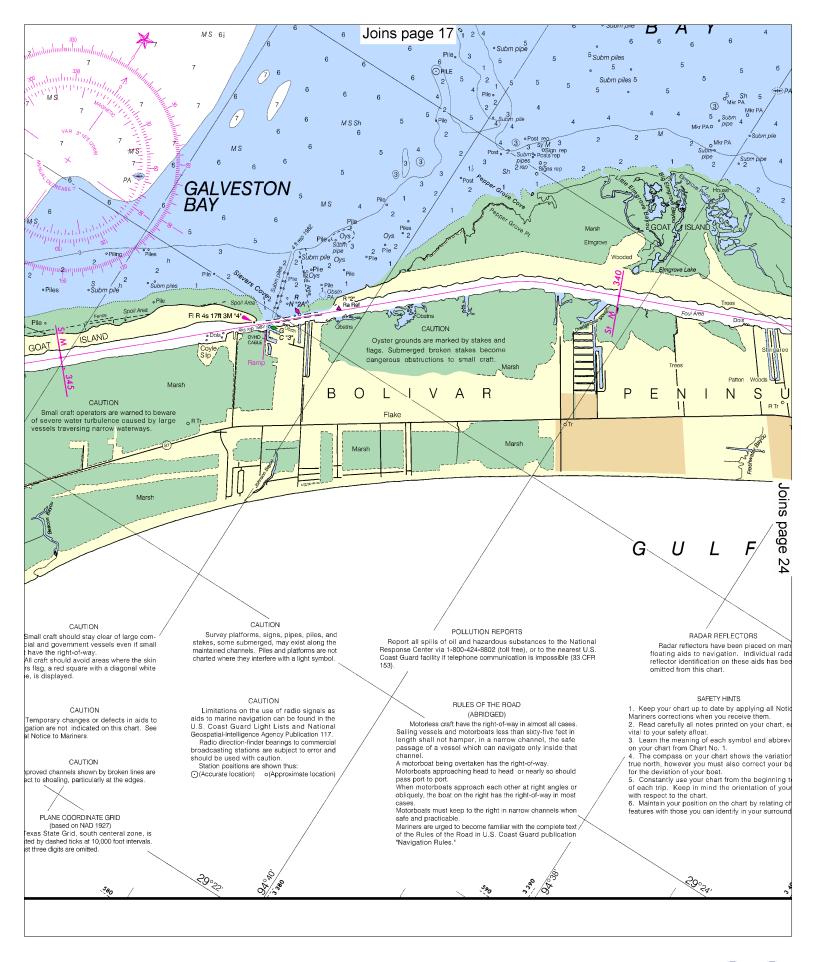


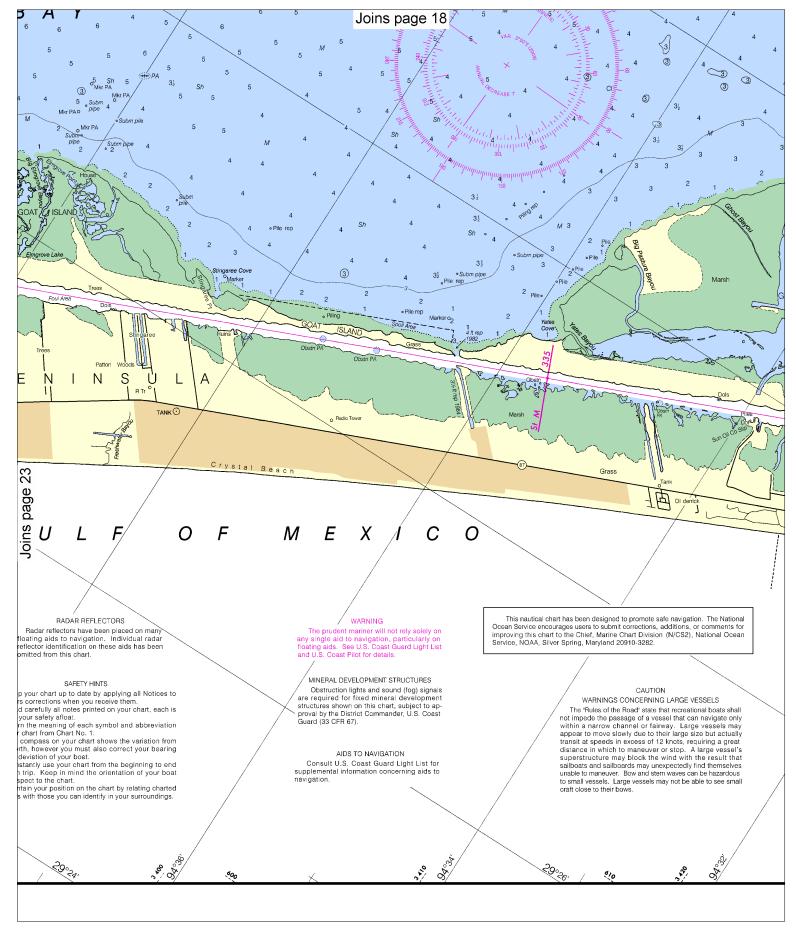
Note: Chart grid lines are aligned with true north.





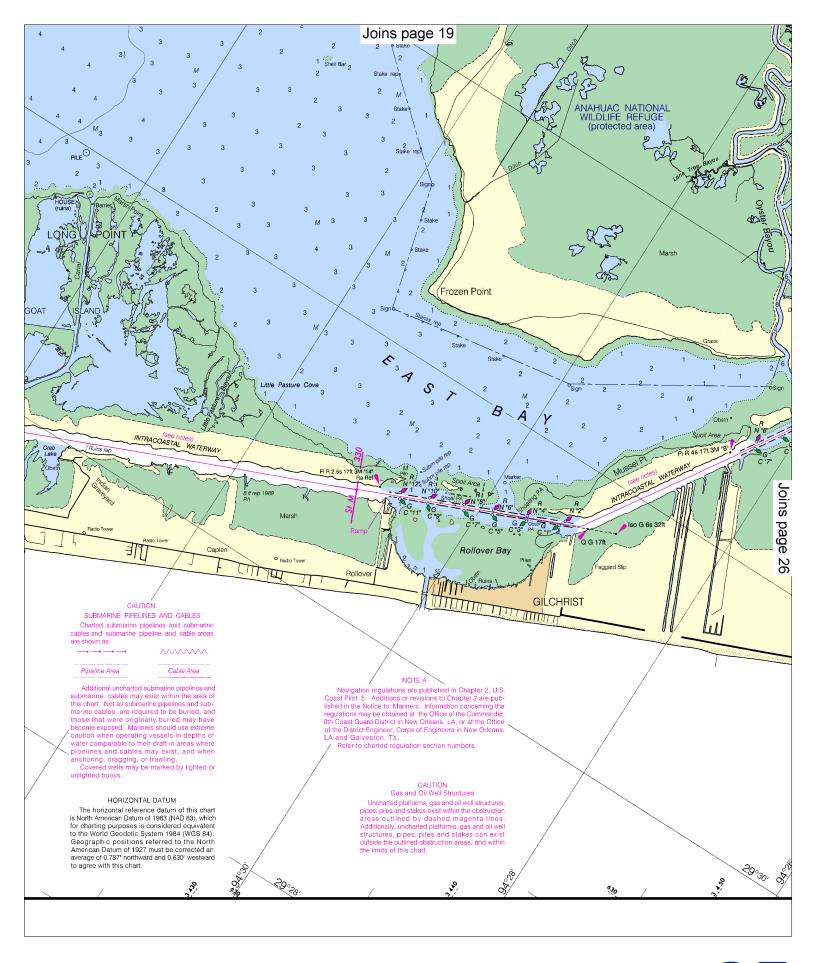


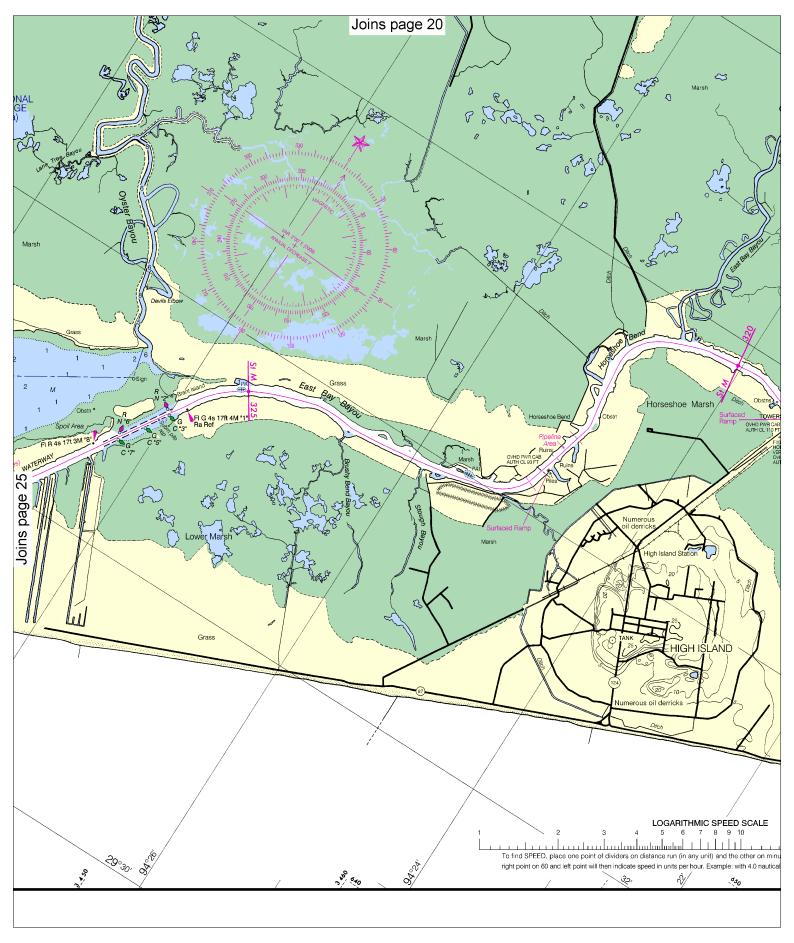


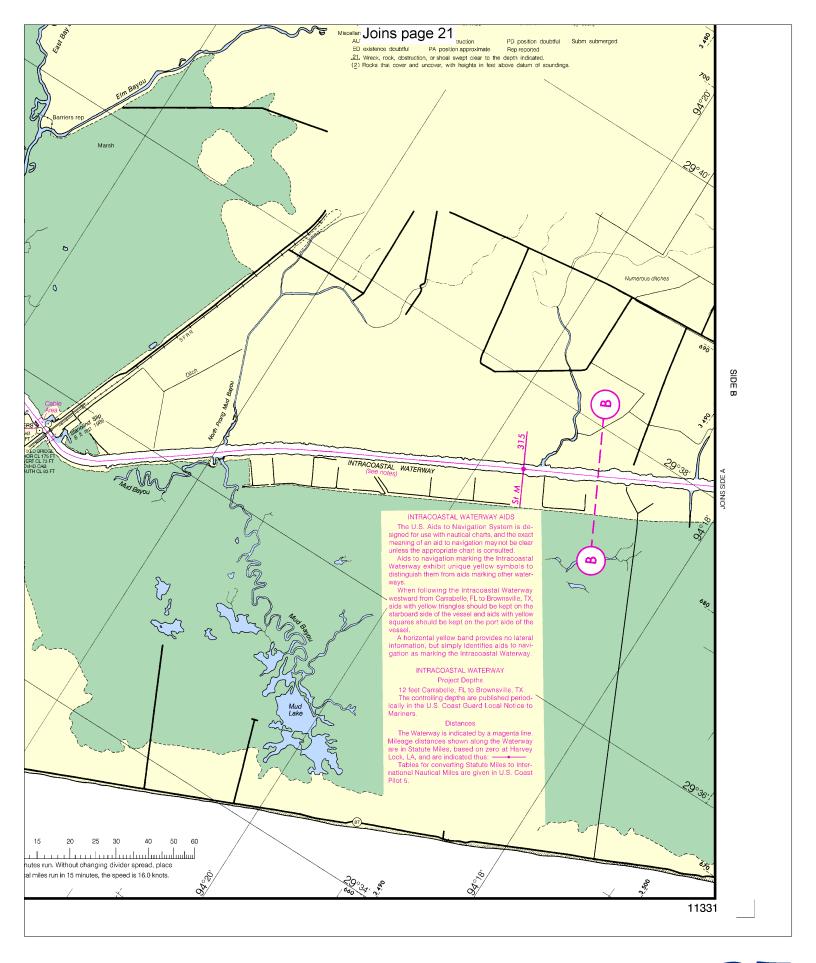


Not line with











VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here. Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of

Emergency; Number of People on Board.

- · Release transmit button.
- Wait for 10 seconds If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

http://www.nws.noaa.gov/nwr/

Quick References

Nautical chart related products and information — http://www.nauticalcharts.noaa.gov

Online chart viewer — http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html

Report a chart discrepancy — http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx

Chart and chart related inquiries and comments — http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs

Chart updates (LNM and NM corrections) — http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html

Coast Pilot online — http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm

Tides and Currents — http://tidesandcurrents.noaa.gov

Marine Forecasts — http://www.nws.noaa.gov/om/marine/home.htm

National Data Buoy Center — http://www.ndbc.noaa.gov/

NowCoast web portal for coastal conditions — http://www.nowcoast.noaa.gov/

National Weather Service — http://www.weather.gov/

National Hurrican Center — http://www.nhc.noaa.gov/

Pacific Tsunami Warning Center — http://ptwc.weather.gov/

Contact Us — http://www.nauticalcharts.noaa.gov/staff/contact.htm



For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

